MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2015/2016

TSE2251/TIS2211 -SYSTEMS ANALYSIS AND DESIGN

(All sections / Groups)

7 MARCH 2016
2.30pm-4.30pm
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 4 pages including this cover page.
2. This Question paper contains **FIVE** questions of **15** marks each. Answer any **FOUR** questions.
3. The distribution of marks for each question is given.
4. Write all your answers in the Answer Booklet provided.

Question 1

(a) Mention the FIVE phases of 'System Development Life Cycle(SDLC)' in the sequential order. What are the TWO major activities performed in the first phase (3marks)

(b) What is Agile methodology? Mention THREE key principles associated with Agile methodology. (3 marks)

(c) Assume that you have a project with 10 activities labeled 1-10. The time taken for each activity and the predecessors are shown in the following table.

Activity	Time taken (in weeks)	Preceding Activity
1	2	-
2	3	1
3	5	1
4	4	1
5	6	2,3
6	7	3,4
7	8	2,5
8	11	5,6
9	10	7,8
10	2	8,9

(a) Draw the network diagram (3 marks)

(b) Calculate the (i) Earliest completion time (TE) and the (ii)Latest completion time(TL) for each activity (4 marks)

(c) List the activities which are on the critical path (2 marks)

Continue...

Question 2

(a) Explain the meaning of 'economic feasibility study of a project'. Distinguish between tangible and intangible benefits with an example for each type (4 marks)

(b) Briefly describe FOUR modern methods used for requirements determination of an information system. (4marks)

(c) Assuming monetary benefits of an information system at $85,000 per year, a discount rate of 12 percent and a five-year time horizon, Calculate:

(i) Net Present Value (NPV) of the benefits (4 marks)

(ii) Return on investment (ROI) if the net present value of all costs of the information system is $201,169 (3 marks)

Question 3

(a) Draw the Context and Level-O data flow diagrams for a typical retail clothing store in a mall, listing relevant data flows, data stores, processes, and sources/sinks. (6 marks)

(b) Briefly explain the three components of a decision table method which is used in the logic modeling of an information system. What is an indifferent condition? (4 marks)

(c) What is meant by the term: 'balancing a data flow diagram'? Give an example for an unbalanced data flow diagram using context and Level-o diagrams. (5 marks)

Continue...

Question 4

(a) What is usability? Describe FIVE usability factors and the associated guide lines to be followed when designing forms and reports. (6 marks)

(b) Assume that in the following 'SALES' relation, the attribute 'Region' is dependent on the attribute 'SalesPerson'

SALES(Customer_ID, Customer_Name, SalesPerson, Region)

(a) Is the relation 'SALES' in 2NF ? Justify your answer.
(b) Is the relation 'SALES' in 3NF ? Justify your answer
(c) If the relation 'SALES' is 2NF , show how it can be converted into 3NF

(4 marks)

(c) Describe the different methods of interacting with a system. Is one method better than the others? (5 marks)

Question 5

(a) What is configuration management? Explain the terms:
(i) Baseline modules, (ii) System librarian and (iii) Build routines (5 marks)

(b) Explain the static, dynamic, automated and manual test methods. Give examples for static-manual, static-automated, dynamic-manual and dynamic-automated tests. (6 marks)

(c) Explain the two types of documentation that are prepared when developing an information system. (4 marks)

End of Question Paper